Amendments to and Listing of the Claims:

1. (Currently amended) A system for conducting a plurality of different medical diagnostic tests, the system comprising:

a hand-held portable, self-contained electronic instrument for engaging a disposable test cell containing a fluid to be tested, the instrument for performing a diagnostic test selected from said plurality of tests upon the fluid within the test cell, the instrument including a reader for reading indicia on the test cell prior to engagement of the test cell, the diagnostic test to be performed being selected by the instrument based upon identification information obtained from the indicia on the test cell; and

a disposable, single use test cell for receiving fluid to be diagnostically tested, the test cell including identification information including indicia indicative of a particular diagnostic test to be performed upon the fluid contained therein, the indicia on a particular test cell being unique to that test cell so that no two test cells contain the same indicia, the test cell being sized and ~~shape~~ shaped for engagement by the instrument.

2. (Original) The system as recited in claim 1 wherein the instrument comprises a housing including an opening for receiving and engaging at least a portion of the test cell therein.

3. (Original) The system as recited in claim 2 wherein the opening in the instrument housing is sized and shaped for receiving the portion of the test cell with a predetermined orientation which precludes insertion of the test cell therein with any other orientation.

4. (Original) The system as recited in claim 2 wherein the housing includes electrical contacts for engaging corresponding electrical contacts on the test cell when the test cell is inserted within the opening of the instrument.

5. (Original) The system as recited in claim 1 wherein the instrument includes a processor and a memory, the memory storing data and instructions for the

performance of each of the plurality of different diagnostic tests, the processor accessing the memory to obtain data and instructions for the performance of the selected test based upon the information obtained from an engaged test cell.

6. (Original) The system as recited in claim 1 wherein the test cell includes at least one chamber for receiving fluid to be tested, the chamber containing at least two electrodes for the performance of ion selective analysis on the fluid within the test cell chamber.

7. (Original) The system as recited in claim 6 wherein the test cell further includes a source of calibration fluid for insertion into the chamber for calibration of the electrodes.

8. (Original) The system as recited in claim 7 wherein the type of calibration fluid contained within the test cell is determined by the particular test to be performed using the test cell.

9. (Original) The system as recited in claim 7 wherein the calibration fluid is inserted into the test cell chamber for calibrating the electrodes before the fluid to be tested is received within the chamber.

10. (Original) The system as recited in claim 7 wherein the calibration fluid is inserted into the test cell chamber for calibration of the electrodes after the fluid to be tested is received within the chamber.

11. (Original) The system as recited in claim 7 wherein the instrument controls the insertion of the calibration fluid into the test cell chamber.

12. (Original) The system as recited in claim 7 wherein the instrument controls the length of time that the calibration fluid remains within the test cell chamber for calibration of the electrodes.

13. (Original) The system as recited in claim 6 wherein at least one of the electrodes is covered by an electrolyte, the composition of which is determined by the particular test to be performed utilizing the test cell.

14. (Original) The system as recited in claim 13 wherein the electrolyte is in the form of a gel impregnated with a selected ionic material.

15. (Original) The system as recited in claim 13 wherein the electrolyte is covered by a ion selective membrane so that the fluid within the chamber to be tested contacts the ion selective membrane.

16. (Original) The system as recited in claim 15 wherein the ion selective membrane is comprised of a polymeric material impregnated with chemical species determined by the particular test to be performed utilizing the test cell.

17. (Original) The system as recited in claim 6 wherein the electrodes are in electrical contact with the instrument when the test cell is engaged by the instrument.

18. (Original) The system as recited in claim 17 wherein the instrument includes electrical circuitry for receiving one of voltage, current and conductivity measurements from the electrodes within the test cell.

19. (Cancelled)

20. (Cancelled)

21. (Currently amended) The system as recited in claim ~~19~~ 1 wherein the indicia is a barcode on the test cell and wherein the instrument includes a barcode scanner for reading the barcode on the test cell.

22. (Cancelled)

23. (Cancelled)

24. (Original) The system as recited in claim 1 wherein the instrument includes a display for displaying the results of diagnostic tests performed by the instrument.

25. (Original) The system as recited in claim 24 wherein the display is comprised of a liquid crystal display.

26. (Original) The system as recited in claim 1 wherein the instrument includes an input device to facilitate inputting of information into the instrument.

27. (Original) The system as recited in claim 26 wherein the input device is an alphanumeric keyboard.

28. (Original) The system as recited in claim 1 wherein the instrument includes a printer for printing the results of diagnostic tests performed by the instrument.

29. (Original) The system as recited in claim 28 wherein the printer comprises a thermal printer.

30. (Original) The system as recited in claim 1 wherein the instrument includes an input/output port for communicating with other devices.

31. (Original) The system as recited in claim 30 wherein the input/output port comprises at least one of an RS 232 interface and an Ethernet interface.

32. (Original) The system as recited in claim 1 wherein the instrument includes an internal power source.

33. (Original) The system as recited in claim 32 wherein the power source comprises at least one rechargeable battery.

34. (Original) The system as recited in claim 33 wherein the instrument further includes a recharger for recharging the at least one rechargeable battery.

35. (Original) The system as recited in claim 1 wherein the instrument includes a unique identification code to provide positive identification of all test results obtained using the instrument.

36. (Original) The system as recited in claim 6 wherein the instrument compares the conductivity between one pair of electrodes and another reference pair of electrodes.

37. (Original) The system as recited in claim 6 wherein the instrument measures current flowing between two electrodes maintained at a controlled voltage potential.

38. (Original) The system as recited in claim 11 wherein the instrument includes an actuator which is connected to the test cell when the test cell is inserted into the instrument such that the actuator causes fluid to flow into the test cell chamber.

39-60. (Cancelled)